

AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions, listing, of claims in the specification.

LISTING OF CLAIMS:

Claim 1 (original) A photo-sensing device package comprising:

- (a) an assembly portion including:
 - i. a substrate formed of a material substantially transparent to light within a predetermined range of wavelengths;
 - ii. at least one metal layer formed on said substrate about a front surface region thereof; and,
 - iii. at least one passivation layer formed to extend over said metal layer, said passivation layer being patterned to define a plurality of access openings to respectively describe on said metal layer a plurality of first solder wettable pads and at least one second solder wettable pad;
- (b) a sensing portion including at least one photo-sensing die for photo-electronically transducing light within said predetermined range of wavelengths, said photo-sensing die defining a photo-sensing area opposing said front surface region of said assembly

portion substrate, said photo-sensing die having formed thereon a plurality of solder bump pads;

- (c) a plurality of first solder joints joining said sensing and assembly portions, each of said first solder joints extending between one said solder bump pad of said sensing portion and one said first solder wettable pad of said assembly portion; and,
- (d) at least one second solder joint coupled to said second solder wettable pad for joining said assembly portion to external circuitry.

Claim 2 (original) The photo-sensing device package as recited in Claim 1 wherein said assembly portion further includes at least one third solder wettable pad for interconnection of an auxiliary electronic component thereto.

Claim 3 (original) The photo-sensing device package as recited in Claim 1 wherein said assembly portion includes a polymer structure disposed about at least a portion of said photo-sensing die for side wall protection and seal thereof.

Claim 4 (original) The photo-sensing device package as recited in Claim 1 wherein said external circuitry joined to said assembly portion by said second solder joint includes a flexible film member.

Claim 5 (original) The photo-sensing device package as recited in Claim 1 wherein said substrate is formed of a glass material.

Claim 6 (original) The photo-sensing device package as recited in Claim 1 wherein said substrate is formed with a thickness within the approximate range of 250 to 800 micrometers.

Claim 7 (original) The photo-sensing device package as recited in Claim 1 wherein said assembly portion includes a plurality of said metal layers, at least one of said metal layers being formed at least partially on said passivation layer to extend at least partially over said first and second access openings and form said first and second solder wettable pads.

Claim 8 (original) The photo-sensing device package as recited in Claim 7 wherein said metal layer forming said solder wettable pads includes an electroless Ni material.

Claim 9 (original) The photo-sensing device package as recited in Claim 1 wherein said first and second solder wettable pads of said assembly portion are each formed with a multi-layered structure including at least an adhesion layer, a diffusion barrier layer, and a solder wettable layer.

Claim 10 (original) The photo-sensing device package as recited in Claim 1 wherein said substrate includes a rear surface on a side thereof opposing said front surface, said substrate having a thin film coating formed on at least one of said front and rear surfaces for altering the transmissivity therethrough of light within said predetermined range of wavelengths.

Claim 11 (original) The photo-sensing device package as recited in Claim 4 wherein said second solder wettable pad is interconnected to at least one said first solder wettable pad, at least one said first solder wettable pad being disposed between said second solder wettable pad and said photo-sensing die.

Claims 12-23 (canceled).